

REMARKS

Claim Rejections

Claims 1-4 and 6 are rejected under 35 U.S.C. § 102(e) as being anticipated by Lim (U.S. 2003/0024393). Claims 7, 8, 10, 12 and 13 are rejected under 35 U.S.C. § 102(e) as being anticipated by Lim. Claims 5 and 9 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Lim in view of Bois (U.S. 3,499,269). Claim 11 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Lim in view of Partin (U.S. 3,976,086). Claim 14 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Lim in view of Ignoffo (U.S. 4,032,310).

Drawings

Applicant proposes to amend Figures 2 and 3, as illustrated in red on the attached photocopies. In Figure 2, it is proposed to amend the figure as Figure 2A and Figure 2B, such that each figure contains a single view. In Figure 3, it is proposed to add the label --5--. No "new matter" has been added to the original disclosure by the proposed amendments to these figures. Approval of the proposed drawing changes is respectfully requested.

Amendments to Specification

Applicant has amended the specification as noted above to cure obvious grammatical and idiomatic inaccuracies. It is believed that the foregoing amendments to the specification overcome the outstanding objections thereto. No "new matter" has been added to the original disclosure by the foregoing amendments to the specification.

New Claims

By this Amendment, Applicant has canceled claims 1-14 and has added new claims 15-30 to this application. It is believed that the new claims specifically set forth each element of Applicant's invention in full compliance with 35 U.S.C. § 112, and define subject matter that is patentably distinguishable over the cited prior art, taken individually or in combination.

New claims 15-21 recite a method for using an anti-pollution device for exhaust comprising the steps of: a) inserting a plurality of filtering materials (4) into an inner filtering chamber (11) of a housing (1) and forming a plurality of clearances between the plurality of filtering materials; b) connecting an inlet hole (2) in the housing to an inlet pipe (21); c) connecting an outlet hole (3) in the housing to an outlet pipe (31); d) inserting exhaust into the inner filtering chamber of the housing through the inlet pipe connected to the inlet hole in the housing; e) filtering out contaminated particles in the exhaust by forcing the exhaust through the plurality of clearances formed by the plurality of filtering material in the inner filtering chamber; f) exhausting treated exhaust from the inner filtering chamber of the housing through the outlet pipe connected to the outlet hole in the housing; and g) removing contaminated particles from the housing through a dust collection hole in a bottom of the inner filtering chamber of the housing.

Other embodiments of the method claim of the present invention include: forcing the exhaust through a plurality of chambers formed by a plurality of partitions protruding from an outer periphery toward a center of the inner filtering chamber; forcing the exhaust through a plurality of grids containing the plurality of filtering materials and removably inserted into the inner filtering chamber to form separated zones; and controlling the housing with equipment selected from the group consisting of a relieve valve for relieving excessive pressure and a temperature controller for temperature reduction installed on the housing.

New claims 22-30 recite an anti-pollution device for exhaust comprising: a housing (1) having: an inner filtering chamber (11) formed in a hollow interior thereof; an inlet hole (2) connected to an inlet pipe (21); an outlet hole (3) connected to an outlet pipe (31); and a dust collection hole (12) in a bottom of the inner filtering chamber for removing contaminated particles from the housing; and a plurality of filtering materials (4) inserted into the inner filtering chamber of the housing and forming a plurality of clearances there between, such that exhaust inserted into the inner filtering chamber through the inlet pipe is filtered through the plurality of clearances formed by the plurality of filtering material in the inner filtering chamber to remove contaminated particles, treated exhaust is released from the inner filtering

chamber through the outlet pipe, and contaminated particles are removed through the dust collection hole.

Other embodiments of the anti-pollution device of the present invention include: a relieve valve for relieving excessive pressure and a temperature controller for temperature reduction installed on the housing; auxiliary equipment connected to the housing and selected from the group of auxiliary equipment consisting of an agitator and an ash blow device; a plurality of partitions protruding from an outer periphery toward a center of the inner filtering chamber and forming a plurality of chambers; and a plurality of grids containing the plurality of filtering materials and removably inserted into the inner filtering chamber to form separated zones.

The primary reference to Lim discloses particulate filtering method and device including a filter part (12), a support part (14) for accommodating and supporting the filter part (12), and a plurality of heating wires (16) positioned within a protective tube (18).

Method Claims

On page 7 of the outstanding office action the examiner admits that Lim does not disclose "a relieve valve for relieving an excessive pressure and/or a temperature controller for a temperature reduction." Lim does not disclose removing contaminated particles from the housing through a dust collection hole in a bottom of the inner filtering chamber of the housing; nor does Lim disclose forcing the exhaust through a plurality of chambers formed by a plurality of partitions protruding from an outer periphery toward a center of the inner filtering chamber.

Apparatus Claims

On page 7 of the outstanding office action the examiner admits that Lim does not disclose "a relieve valve for relieving an excessive pressure and/or a temperature controller for a temperature reduction" and "Lim does not disclose an agitator and/or an ash blowing device being added to the housing." Lim does not disclose a dust collection hole in a bottom of the inner filtering chamber for removing contaminated particles from the housing; nor does Lim disclose a plurality of partitions protruding from an outer periphery toward a center of the inner filtering chamber and forming a plurality of chambers.

It is axiomatic in U.S. patent law that, in order for a reference to anticipate a claimed structure, it must clearly disclose each and every feature of the claimed structure. Applicant submits that it is abundantly clear that Lim does not disclose each and every feature of Applicant's new claims and, therefore, could not possibly anticipate these claims under 35 U.S.C. § 102. Specifically, as to claims 15 and 22, Lim does not disclose removing contaminated particles from the housing through a dust collection hole in a bottom of the inner filtering chamber of the housing, or a dust collection hole in a bottom of the inner filtering chamber for removing contaminated particles from the housing. Absent a specific showing of these features, Lim cannot be said to anticipate any of Applicant's new claims under 35 U.S.C. § 102.

The secondary reference to Bois discloses an exhaust gas purifying device including a silencer (1) with an inlet pipe (2) and an outlet pipe (3), two concentric cylindrical wire-mesh members (7, 8) containing filtering material (9) therebetween, and a valve member (15).

Method Claims

Bois does not disclose removing contaminated particles from the housing through a dust collection hole in a bottom of the inner filtering chamber of the housing; forcing the exhaust through a plurality of chambers formed by a plurality of partitions protruding from an outer periphery toward a center of the inner filtering chamber; forcing the exhaust through a plurality of grids containing the plurality of filtering materials and removably inserted into the inner filtering chamber to form separated zones; nor does Bois disclose controlling the housing with equipment selected from the group consisting of a temperature controller for temperature reduction installed on the housing.

Apparatus Claims

Bois does not disclose a dust collection hole in a bottom of the inner filtering chamber for removing contaminated particles from the housing; a plurality of partitions protruding from an outer periphery toward a center of the inner filtering chamber and forming a plurality of chambers; a plurality of grids containing the plurality of filtering materials and removably inserted into the inner filtering chamber to form separated zones; a temperature controller for temperature reduction installed

on the housing; nor does Bois disclose auxiliary equipment connected to the housing and selected from the group of auxiliary equipment consisting of an agitator and an ash blow device.

The secondary reference to Partin discloses a process for cleaning dry catalyst beds including a tank (10), a tray (22) with a plurality of openings (23), a flat screen member (30) with a plurality of openings (32), and a catalyst mask (18) moved by a raking means (40).

Method Claims

Partin does not disclose removing contaminated particles from the housing through a dust collection hole in a bottom of the inner filtering chamber of the housing; forcing the exhaust through a plurality of chambers formed by a plurality of partitions protruding from an outer periphery toward a center of the inner filtering chamber; disclose forcing the exhaust through a plurality of grids containing the plurality of filtering materials and removably inserted into the inner filtering chamber to form separated zones; nor does Partin controlling the housing with equipment selected from the group consisting of a relieve valve for relieving excessive pressure and a temperature controller for temperature reduction installed on the housing.

Apparatus Claims

Partin does not disclose a dust collection hole in a bottom of the inner filtering chamber for removing contaminated particles from the housing; a plurality of partitions protruding from an outer periphery toward a center of the inner filtering chamber and forming a plurality of chambers; a plurality of grids containing the plurality of filtering materials and removably inserted into the inner filtering chamber to form separated zones; a relieve valve for relieving excessive pressure and a temperature controller for temperature reduction installed on the housing; nor does Partin disclose auxiliary equipment connected to the housing and selected from the group of auxiliary equipment consisting of an ash blow device.

The secondary reference to Ignoffo discloses a muffler and exhaust gas purifier including a purifier unit (10), an expansion chamber (11), and a housing (12). The housing (12) includes a removable cartridge (21). Ignoffo states, column 4, lines 54-57:

The two chambers or housings 12a and 12b are bolted by bolts 18 to each other (with a gasket 19 therebetween) and respectively to muffling chamber 13 and expansion chamber 11.

Method Claims

Ignoffo does not disclose removing contaminated particles from the housing through a dust collection hole in a bottom of the inner filtering chamber of the housing; forcing the exhaust through a plurality of chambers formed by a plurality of partitions protruding from an outer periphery toward a center of the inner filtering chamber; nor does Ignoffo disclose controlling the housing with equipment selected from the group consisting of a relieve valve for relieving excessive pressure and a temperature controller for temperature reduction installed on the housing. Ignoffo teaches connecting two housings end to end, but does not teach forcing the exhaust through a plurality of grids containing the plurality of filtering materials and removably inserted into the inner filtering chamber to form separated zones.

Apparatus Claims

Ignoffo does not disclose a dust collection hole in a bottom of the inner filtering chamber for removing contaminated particles from the housing; a plurality of partitions protruding from an outer periphery toward a center of the inner filtering chamber and forming a plurality of chambers; a relieve valve for relieving excessive pressure and a temperature controller for temperature reduction installed on the housing; nor does Ignoffo disclose auxiliary equipment connected to the housing and selected from the group of auxiliary equipment consisting of an agitator and an ash blow device. Ignoffo teaches connecting two housings end to end, but does not teach a plurality of grids containing the plurality of filtering materials and removably inserted into the inner filtering chamber to form separated zones.

Even if the teachings of Lim, Bois, Partin, and Ignoffo were combined, as suggested by the Examiner, the resultant combination does not suggest:

- A) for the method claims, 1) removing contaminated particles from the housing through a dust collection hole in a bottom of the inner filtering chamber of the housing; 2) forcing the exhaust through a plurality of chambers formed by a plurality of partitions protruding from an outer

periphery toward a center of the inner filtering chamber; 3) forcing the exhaust through a plurality of grids containing the plurality of filtering materials and removably inserted into the inner filtering chamber to form separated zones; nor does the combination suggest 4) controlling the housing with equipment selected from the group consisting of a temperature controller for temperature reduction installed on the housing; nor does the combination suggest

- B) for the apparatus claims, 1) a dust collection hole in a bottom of the inner filtering chamber for removing contaminated particles from the housing; 2) a plurality of partitions protruding from an outer periphery toward a center of the inner filtering chamber and forming a plurality of chambers; 3) a temperature controller for temperature reduction installed on the housing; nor does the combination suggest 4) auxiliary equipment connected to the housing and selected from the group of auxiliary equipment consisting of an ash blow device.

It is a basic principle of U.S. patent law that it is improper to arbitrarily pick and choose prior art patents and combine selected portions of the selected patents on the basis of Applicant's disclosure to create a hypothetical combination which allegedly renders a claim obvious, unless there is some direction in the selected prior art patents to combine the selected teachings in a manner so as to negate the patentability of the claimed subject matter. This principle was enunciated over 40 years ago by the Court of Customs and Patent Appeals in In re Rothermel and Waddell, 125 USPQ 328 (CCPA 1960) wherein the court stated, at page 331:

The examiner and the board in rejecting the appealed claims did so by what appears to us to be a piecemeal reconstruction of the prior art patents in the light of appellants' disclosure. ... It is easy now to attribute to this prior art the knowledge which was first made available by appellants and then to assume that it would have been obvious to one having the ordinary skill in the art to make these suggested reconstructions. While such a reconstruction of the art may be an alluring way to rationalize a rejection of the claims, it is not the type of rejection which the statute authorizes.

The same conclusion was later reached by the Court of Appeals for the Federal Circuit in Orthopedic Equipment Company Inc. v. United States, 217 USPQ 193 (Fed.Cir. 1983). In that decision, the court stated, at page 199:

As has been previously explained, the available art shows each of the elements of the claims in suit. Armed with this information, would it then be non-obvious to this person of ordinary skill in the art to coordinate these elements in the same manner as the claims in suit? The difficulty which attaches to all honest attempts to answer this question can be attributed to the strong temptation to rely on hindsight while undertaking this evaluation. It is wrong to use the patent in suit as a guide through the maze of prior art references, combining the right references in the right way so as to achieve the result of the claims in suit. Monday morning quarterbacking is quite improper when resolving the question of non-obviousness in a court of law.

In In re Geiger, 2 USPQ2d, 1276 (Fed.Cir. 1987) the court stated, at page 1278:

We agree with appellant that the PTO has failed to establish a *prima facie* case of obviousness. Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching suggestion or incentive supporting the combination.

Applicant submits that there is not the slightest suggestion in either Lim, Bois, Partin, or Ignoffo that their respective teachings may be combined as suggested by the Examiner. Case law is clear that, absent any such teaching or suggestion in the prior art, such a combination cannot be made under 35 U.S.C. § 103.

Neither Lim, Bois, Partin, nor Ignoffo disclose, or suggest a modification of their specifically disclosed structures that would lead one having ordinary skill in the art to arrive at Applicant's claimed structure. Applicant hereby respectfully submits that no combination of the cited prior art renders obvious any of Applicant's new claims.

Application No. 10/086,881

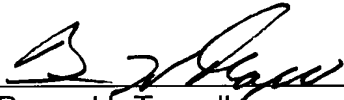
Summary

In view of the foregoing amendments and remarks, Applicant submits that this application is now in condition for allowance and such action is respectfully requested. Should any points remain in issue, which the Examiner feels could best be resolved by either a personal or a telephone interview, it is urged that Applicant's local attorney be contacted at the exchange listed below.

Respectfully submitted,

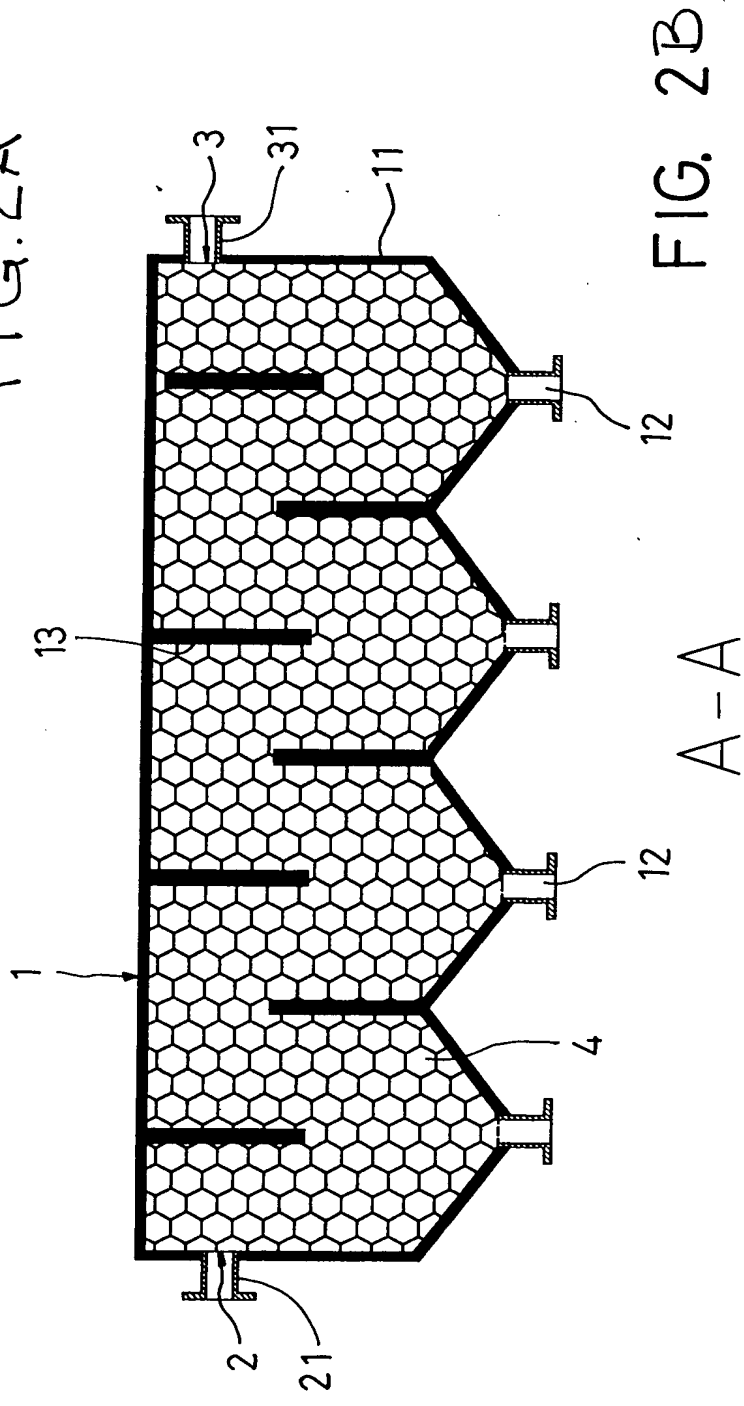
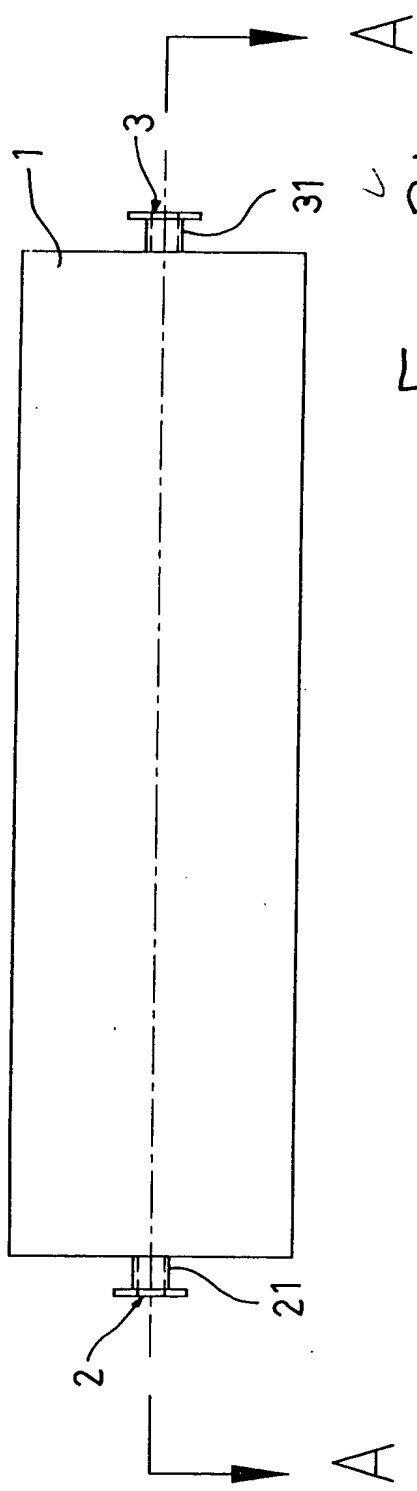
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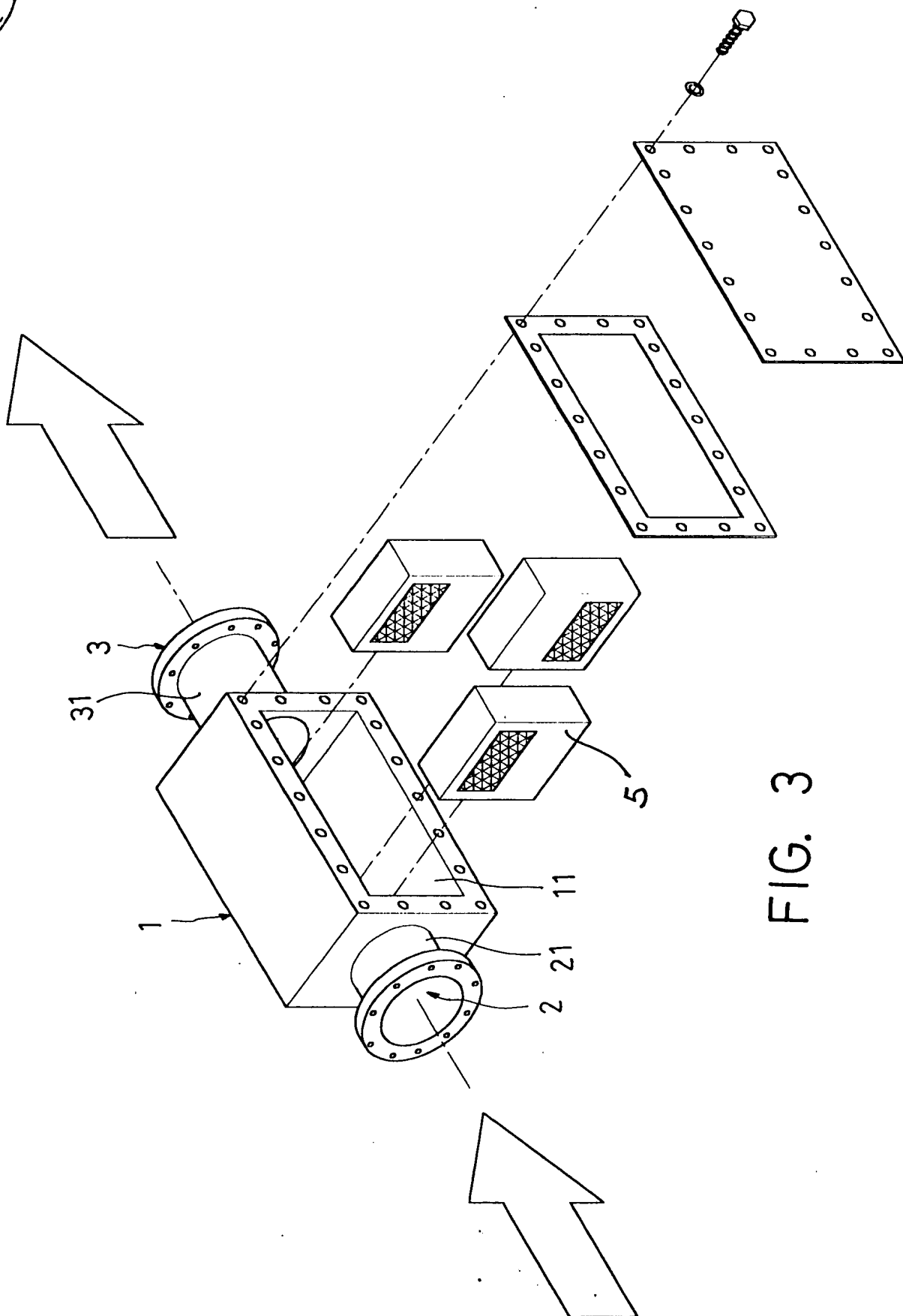


FIG. 3